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EXAMINER
LEE, DOUGLAS S

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
	10/575,022	NIXON ET AL.
Office Action Summary	Examiner	Art Unit	
	DOUGLAS S. LEE	2121	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS,
WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☐ Responsive to communication(s) filed on _____.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
   closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-26</u> is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1-26</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on <u>07 April 2006</u> is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a) ☐ All   b) ☐ Some * c) ☐ None of:

   1. ☐ Certified copies of the priority documents have been received.

   2. ☐ Certified copies of the priority documents have been received in Application No. _____.

   3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage
      application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
   Paper No(s)/Mail Date <u>12/6/2007, 09/10/2008</u>.

4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 101

1.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim1-26 are rejected under 35 U.S.C. 101 because the claimed invention is directed

to non-statutory subject matter. An example of a method claim that would not qualify as

a statutory process would be a claim that recited purely mental steps. Thus, to qualify

as a 101 statutory process, the claims should positively recite the other statutory class

(the thing or product) to which it is tied, for example by identifying the apparatus that

accomplishes the method steps, or positively recite the subject matter that is being

transformed, for example by identifying the material that is being changed to a different

state.

Claim Rejections - 35 USC § 102

> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1.   Claims 1, 2 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by

Onarheim et al. (US Pat. #5,168,441).

Regarding claim 1, Onarheim et al. disclose methods for set up and

programming of machine and process controllers and specifically discloses the following

technical features (see line 27, column 3 to line 28, column 23 of the description and

figures 1-43): a simulation algorithm is created in an editing window (33) (corresponding

to displaying in the first portion a workspace), and the simulation algorithm is depicted

by connections among the process objects; the process objects stored in a library of

process objects (50) may be added to the editing window (33) to be displayed, and a

process object in the library of process objects corresponds to a physical entity in the

process plant and is represented by the corresponding graphics; if a process object is

selected by a user in the editing window, indications of parameters of the selected

process object may be displayed in the editing window.

Regarding claim 2, Onarheim et al. disclose (see figure 8) that a process object

comprises a motor, a pump, and a valve (corresponding to the actuator object).

Regarding claim 5, Onarheim et al. disclose (see figures 7-10) that connection

among process objects such as a sensor, a motor and a control valve are displayed in

the editing window (33) based on a process graphic created using a process graphics

editor.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

3.   The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 3, 4, and 6-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Onarheim et al. (US Pat. #5,168,441).

Regarding claim 3, Onarheim et al. discloses (see figure 26) that when an input voltage module selects a voltage, a pull-down menu for the parameters of the inputted voltage appears in a view window to enable a user to select the corresponding value of a parameter of the voltage based on the demands in design. The sole difference between this claim and Onarheim et al. is the additional technical feature that the parameter corresponding to an indication may be modified via the indication is a routine means, because those skilled in the art usually define indications of parameters set in a system to a modifiable mode to achieve feasibility of the designed solution, when performing system design, and it is easy for those skilled in the art to think of this designed solution. It can be seen from the above that it is obvious to those skilled in the art to acquire the technical solution sought for protection by claim 3 by combining Onarheim et al. with the routine means.

Regarding claim 4, Onarheim et al. disclose (see figure 26) that when an input voltage module selects a voltage, a pull-down menu for the parameters of the inputted voltage appears to enable a user to select the corresponding parameter based on the demands in design, and there is the last item, "OTHER", in the menu to be selected by a user if the required parameter is not in the menu. The sole difference between this

claim and Onarheim et al. is the additional technical feature of claim 4, "providing in the third portion a display to enable the user to add the new parameter", is a routine means, because it is easy for those skilled in the art to think of that a newly added parameter is displayed in a third portion of a display window, which is a common method of design in engineering design. It can be seen from the above that it is obvious to those skilled in the art to acquire the technical solution sought for protection by claim 4 by combining Onarheim et al. with the routine means.

Regarding claim 6, the sole difference between this claim and Onarheim et al. is is a routine means because, in engineering practice, it is determined based on demands in system design whether a process module editor is adapted to allow a user to select a model, which is to simulate behavior of a physical entity in the process plant corresponding to the process object, for a process object from a plurality of models, and it is easy for those skilled in the art to think of the additional technical feature. Thus, it is obvious to those skilled in the art to acquire the technical solution sought for protection by claim 6 by combining Onarheim et al. with the routine means.

Regarding claim 7, the sole difference between this claim and Onarheim et al. is a routine means because in engineering practice, those skilled in the art often use a step response model or a first principals model, which are used most frequently and are the simplest models in engineering, as the model to be selected in the system when prompting a user to select a model and it is easy for those skilled in the art to think of the additional technical feature.

Regarding claim 8, the sole difference between this claim and Onarheim et al. is a routine means because in engineering practice, it is determined based on demands in system design whether the process object in the workspace is capable of having a step response model associated with a first parameter of the process object and a first principals model associated with a second parameter of the process object; if there is such demand of a system, it is easy for those skilled in the art to adopt this solution, which is also a common method of design in engineering design.

Regarding claims 9-10, Onarheim et al. disclose (see figure 26) that after a user selects a indication of a parameter of a source voltage, the parameter of the source voltage corresponding to the selected indication is linked to the control system to implement process control activities in the carwash plant. Moreover, the additional technical feature that a display is provided for an indication is a routine means, which is a common method of design in engineering practice to those skilled in the art. It can be seen from the above that it is obvious to those skilled in the art to acquire the technical solutions respectively sought for protection by claims 9 and 10 by combining Onarheim et al. with the routine means.

5.   Claims 11-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blevins (WO95/04314).

Regarding claim 11, Blevins discloses a uniform control template generating system and a method for process control programming and discloses that a template generator comprised in a control template system provides an interface that allows a user to generate a new control template function or to modify an existing control

template function, and the template generator comprises an attributes and methods language generator and a graphics generator; the attributes and methods language generator provides various display screens that allow a user to define multiple attribute functions such as input, output and other attributes associated with generating a new control template function or modifying an existing control template function; the template generator also provides a display screen that enables a user to select a method or program for executing the new or modified function of the special control template; the graphics generator provides a method for designing graphical views to be associated with a special control template. Reference document 2 also discloses the following technical features (see line 7, page 9 to line 27, page 32 of the description and figures 1-16): the control template system generates a control template (130) following related instructions; control template views (34, 36, 38) are generated and shown in the corresponding windows as a part of the control template (130) (the function implemented by the control template corresponds to that implemented by the process graphics editor, i.e. creating a graphical representation of physical entities in a process plant and adapting the graphical representation to be displayed on a display device); the operator's view of a control template includes data (36) created by the control template (130); an operator may select data (36) to access the newly created operator's view of the control template (130) and add it to the operator's interface display (118) which is constructed using other stored data (52, 54, 58, 60, and 62) from the operator's view; data (52, 54, 58, 60, and 62) include multiple interconnected process objects representative of multiple corresponding physical entities in the process plant and the

process objects include a method adapted to perform a function using parameter data

to produce process operation associated with the corresponding physical entities (the

function corresponds to that implemented by the process module editor, i.e. creating or

modifying of a process module, the process module including interconnected process

objects representative of corresponding physical entities in the process plant, the

process objects including a method adapted to perform a function using parameter data

to produce an output related to process operation associated with the corresponding

physical entities in the process plant); the generated control template (130) forms a

common or universal environment, and when the control template detects that the

engineer's view is modified, the formed environment will modify all the other necessary

views (such as the operator's view, the maintenance view, and lab view) to eliminate the

need to create separately additional templates for each of the other views; the additional

technical feature that a change made to the graphical representation of the physical

entities is detected by a supervisor module and a process module editor is instructed to

make a corresponding change to the process module is a routine means, because this

method of design is a common method of design in engineering design to those skilled

in the art and it is easy for those skilled in the art to think of this method of design. Thus,

it is obvious to those skilled in the art to acquire the technical solution sought for

protection by claim 11 by combining Blevins with the common knowledge.

Regarding claim 12, Blevins discloses (see line 7, page 9 to line 27, page 32 of

the description and figures 1-16) that the generated control template (130) forms a

common or universal environment, and when the control template (130) detects that the

engineer's view is modified, the formed environment will modify all the other necessary views (such as the operator's view and lab view) to eliminate the need to create separately additional templates for each of the other views; after the additional technical feature that a change made to a process module is detected by a supervisor module, a process graphics editor is instructed to make a corresponding change to the graphical representation of the physical entities in the process plant is a routine means to those skilled in the art, because such method of design is a common one to engineering designers and it is easy for the engineering designers to think of such method of design.

Regarding claim 13, the sole difference between this claim and Blevins is a routine means because a process module is a connection relationship between graphics of physical entities in a process plant, and when some changes need to be made to the process module by a process module editor in engineering practice, those skilled in the art usually change the makeup and configuration (such as adding or removing a process graphic) to generate the different makeup and configuration of a system without changing the graphical representation of the physical entities in the process plant; it is also easy for those skilled in the art to think of this method.

Regarding claim 14, the sole difference between this claim and Blevins is a routine means because the graphic of a physical entity in a process plant is to only represent the physical entity in the form of a graphic, and when those skilled in the art make some changes such as a change in an internal parameter and a change in an indication to a physical entity via a process graphics editor, the process module is not changed usually, i.e. the constitution of the process module are not changed usually

because the process module is the system aggregation of the graphical representation of the physical entities. Thus, it is obvious to those skilled in the art to acquire the technical solution sought for protection by claim 14 by combining Blevins with the routine means.

Regarding claim 15, Blevins discloses (see line 7, page 9 to line 27, page 32 of the description and figures 1-16) that a control template library contains data representing sets of predefined or existing control template functions for use in process control programs; an interface is provided by a new template generator for allowing a user to generate a new control template function or to modify an exiting control template function, which may be stored in a control template library; the sole difference between this claim and the Blevins is the additional technical feature that a process module is stored in a database separate from the graphical representation is a routine means, because such method of design is a common one to those skilled in the art and it is easy for those skilled in the art to think of such method of design. Thus, it is obvious to those skilled in the art to acquire the technical solution sought for protection by claim 15 by combining claim 11 with the routine means.

Regarding claim 16, Blevins discloses (see line 7, page 9 to line 27, page 32 of the description and figures 1-16) that a control template system comprises a control template library; it is a content disclosed impliedly that the system comprises a computer readable memory, because there must be a memory in a control system comprising a computer and the system must store the control template library in the memory; the other additional technical features of claim 16 are routine means because

those skilled in the art usually implement a process module editor, a process graphics

editor and a supervisor module with applications created through programming to

implement their respective specific functions, and store the applications in a storage

medium and adapt the applications to be executed on a processor to create or modify

the graphical representation of physical entities in a process plant, to create or modify a

process module, and to detect the change made to the graphical representation of the

physical entities in the process plant and to instruct the process module editor to make

the corresponding change, if any, to the process module, and it is also easy for those

skilled in the art to think of such method of design. Thus, it is obvious to those skilled in

the art to acquire the technical solution sought for protection by claim 16 by combining

Blevins with the routine means.

Regarding claim 17, the sole difference between this claim and Blevins is a

routine means because it is determined based on requirements in system design in

engineering practice whether a process module is adapted to permit a user to select a

model, which is to simulate behavior of a physical entity in the process plant

corresponding to the process object, for a process object from a plurality of models and

it is easy for those skilled in the art to think of the additional technical feature. Thus, it is

obvious to those skilled in the art to acquire the technical solution sought for protection

by claim 17 by combining Blevins with the routine means.

Regarding claim 18, the sole difference between this claim and Blevins is a

routine means because it is a common method in engineering practice that those skilled

in the art design a system in which a process module editor is adapted to allow a user to

select one of a step response model and a first principals model for a process object,

and if a user selects a model for a process object, engineering designers shall consider

first the models that are used most frequently and are simplest in engineering, i.e. a

step response model or a first principals model.

Regarding claim 19, Blevins discloses (see figure 15) that a flow control valve is

connected to a filling trunk in an operator's view and the flow of liquid flowing in and out

the filling trunk is controlled with the flow control valve during operation of the system. It

can be seen from the above that reference Blevins discloses the additional technical

features of claim 19.

Regarding claim 20, Blevins discloses (see line 7, page 9 to line 27, page 32 of

the description and figures 1-16) that a control template (130) forms a common or

universal environment by the CPU executing the corresponding application in the

control template, and when the engineer's view is modified, the environment modifies all

the other necessary views (such as the operator's view and lab view) correspondingly to

eliminate the need to create separately additional templates for each of the other views

and the corresponding views are displayed in the corresponding windows; a

corresponding change to the operator's view corresponding to the graphical

representation of a physical entity is detected by executing the corresponding

application of the control template, and the operator's view includes a process object

representative of connected physical entity; when detecting a change to the operator's

view, the control template changes the templates of the corresponding views using the

corresponding executable programs and instructions of the control template; the

additional technical feature that a change to the graphical representation of physical

entities in a process plant is made by using a process graphics editor communicatively

coupled to the supervisor module application is a routine means to those skilled in the

art, because such method is a common technical means in engineering practice to

those skilled in the art and it is easy for those skilled in the art to think of such method.

Thus, it is obvious to those skilled in the art to acquire the technical solution sought for

protection by claim 20 by combining Blevins with the common knowledge.

  Regarding claim 21, Blevins discloses (see line 7, page 9 to line 27, page 32 of

the description and figures 1-16) that a change to the operator's view is detected by the

corresponding functional program of the control template, and the corresponding

change is made to the operator's view by using the corresponding control function; the

application of the corresponding function in the control template is executed to detect a

change to the graphical representation of physical entities; the change corresponds to

the detected change to the operator's view; after the corresponding change to the

graphical representation of physical entities is detected, the control template modifies

the graphical representation of physical entities by running the corresponding

executable program and instructions and based on the change to the graphical

representation of physical entities. It can be seen from the above that Blevins discloses

the additional technical features of claim 21.

  Regarding claims 22-23, the sole difference between these claims and Blevins

are routine means because in engineering design, it is determined based on the

application environment of the system and the demands in the engineering design that

the process graphics editor and the process module editor are applications executed by

the first processor or that at least one of the process graphics editor or the process

module editor is an application executed by a second processor, and it is easy for those

skilled in the art to think of this method. Thus, it is obvious to those skilled in the art to

acquire the technical solutions respectively sought for protection by claims 22-23 by

combining Blevins with the routine means.

Regarding claim 24, Blevins discloses (see figure 15) that the interconnected

process objects comprise a valve actuator object. It can be seen from the above that

reference document 2 discloses the additional technical features of claim 24.

Regarding claim 25, Blevins discloses (see line 7, page 9 to line 27, page 32 of

the description and figures 1-16) that the operator's view of a control template includes

data (36) created by the control template (130); an operator may select data (36) to

access the newly created operator's view of the control template (130) and add it to the

operator's interface display (118) which is constructed using other stored data (52, 54,

58, 60, and 62) from the operator's view; data (52, 54, 58, 60, and 62) include multiple

interconnected process objects representative of multiple corresponding physical

entities in the process plant and the process objects include a method adapted to

perform a function using parameter data to produce process operation associated with

the corresponding physical entities. It can be seen from the above that Blevins discloses

all the technical features of claim 25.

Regarding claim 26, the sole difference between this claim and Blevins is routine

means because it is determined based on demands in system design, implementation

of functions and operation environment in engineering design whether those skilled in

the art make a version of the graphical representation of physical entities in the process

plant be copied from a database to a computing system separate from the database

and communicatively coupled to the database and make a version of the process

module be copied from the database to the computing system, and it is easy for those

skilled in the art to think of the additional technical feature. Thus, it is obvious to those

skilled in the art to acquire the technical solution sought for protection by claim 26 by

combining Blevins with the routine means.

CONCLUSION

1.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Douglas Lee, whose telephone number is (571) 272-3745. The examiner can normally be reached on Monday-Friday from 8:00AM- 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, *Albert Decady*, can be reached on *(571) 272-3819 or via e-mail addressed to [Albert Decady@uspto.gov]*. The fax number for this Group is (571) 273-8300.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [**doug.lee@uspto.gov**].

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

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system, see http://pair-direct.uspto.gov. Should you have questions on access to Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (in USA or CANADA) or 571-272-1000.

/D. S. L./

/Albert DeCady/

Supervisory Patent Examiner, Art Unit 2121